TC8-5555-65 Copy <u>3</u> of <u>1</u>

7 OCT 1965

MEMORANDUM FOR THE RECORD

SUBJECT: Forecasting Capability as Reflected in NIE's

- 1. NIE's dating from 1958 through 1964 have been surveyed in order to determine the quality of the forecasts. The NIE series looked at include 11-8 and 11-4, and attention has been focussed on strategic strike forces -- specifically bombers, ICBM's, and missile launching nuclear powered submarines.
- 2. The general conclusion of this survey is that from an overall strategic power point of view, the forecasts have been amazingly accurate. Specifically, as compared to estimates of current force levels, forecasts have been within a maximum of 205 out of a total of 1100-1200 bombers. The number of submarines forecast was within a maximum of 14 of the current estimate. ICBM estimates, though very optimistic for the Soviets early in the period, that is up to about 1962, do appear reasonably close to current estimates in later periods.
- 3. Under a formula which equates, so far as total strategic striking power is concerned, one bomber to one ICBM to one-fifth of a missile launching nuclear submarine, the average deviation of forecast from current estimates was about 75 units and the maximum deviation only about 200 units from the current estimates of the total force units, which is about 1300-1400.
- 4. The general approach to the comparisons of this survey is that current estimates represent a base line against which forecasts can be evaluated. While it is true, particularly early in the time period, that even current force level estimates contain some errors, still they represent the best available yardstick. As the satellite collection effort increased it is very probable that current estimates become more



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TCS-5555-65 Page 2

accurate, and thus a better measure of comparison. Additionally, over the years the impact of better knowledge of economic and strategic evaluation techniques and improved inputs at least increases confidence in forecasts and likely increases their accuracy as well. This is shown by our current estimates of force levels looking backwards from now. Except for 1959, 1960 and 1961, when the then current estimates were 15, 30 and 40 operational ICBM's instead of the 0, 4 and 5 we now think the Soviets had, very little differences exist between the current estimates --- the base for this paper --and our present judgments of the past.

- 5. The large overestimates of the Soviet ICBM capabilities forecast up to 1963 might be related partially to the post Sputnik panic and to the tremendous underestimation of the difficulties and expense within the U. S. for our own ICBM programs. Additionally, in contrast to bombers, where patterns for production and use were relatively well known, for ICBM's the forecast span stretched from no operational and construction experience to extensive deployment on a brand new weapon system. And, finally, in this unknown area, there must have been strong tendencies to err on the high side in order not to face what might be considered the more severe penalty of underestimating.
- 6. On Charts 1, 3 and 5 are shown the forecasts of force levels for bombers, ICBM's, and nuclear powered missile igunching submarines. From these charts an interpolated current estimate was derived and this formed the base against which the forecasts were compared. On Charts 2, 4 and 6 are shown the differences between the forecasts and the interpolated current estimates, and also the average and maximum deviations. On Chart 7 are shown the deviations of forecast from current estimates for the composite strategic force. It is interesting to note that, under the assumptions, the current estimate of total composite force remained remarkably constant and is forecast to continue so through 1970.

Next 8 Page(s) In Document Exempt